



**March
2016**

The Surrey Amateur Radio Club

Communicator

*As of today...
we have a clubhouse!*



March 2016



At The Last Meeting...

SURREY AMATEUR RADIO CLUB

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At The February 10, 2016 Meeting...

The meeting was called to order at 7:02pm. Stan Williams VA7NF chaired the meeting.

23 members were in attendance

Clubhouse Update: Mike Plant VE7AT

We will get keys on March 1st. We have a 1 year lease for approximately 1000 square feet. The Fire department, Softball City and Lucy's Place Day Care also share the building with us. The total number of rooms available to us is now 7 and we already have plans for 2 Radio operating station rooms and 1 work station.

We may be applying for grant for radio equipment. Discussions are also in the works with Shaw cable to get a connection for the Internet as a non-profit.

We have permissions for wires in trees, and raising our own antennas. We're on a list as a non-profit group and a company named Green Solutions could provide us some used office furniture very soon. We are looking for a 40ft container as an outdoor storage area and looking to form a committee to discuss what the next steps for the clubhouse will be. An e-mail should be going out to the membership to identify those who are interested to serve.

Al Neufeld VE7CDC questioned the adequacy of a 1-year lease, and expressed the view that more "transparency" to the membership was required regarding the decision to accept the City's offer. Discussion followed and various views, pro and con, were expressed by the members present.

Repeater Update: Mike Plant VE7AT

Our 220mhz repeater is back online now and has the IRLP node and remote controller installed.

The current issue is BCWARN Internet at Concord 1. It is not connected but should be fixed in 1-2 days time.

There is a noon time net with approximately 10 people every day joining in and we are gaining some new members from this.

Financial Report: Scott Hawrelak VE7HA

Scott provided a run-down of SARC finances.

Basic Licensing Class

Some brochures and posters have been prepared and printed. We are hoping that the membership will help spread the word by posting these around the neighbourhood etc.

Membership Report

No update, the current member count is 82 members

Website Update

Jeremy Morse VE7TMY is working on a demo of a new website concept for the club directors and our website manager to review.

Contest Group update: John Brodie VA7XB

We competed in the BC QSO Party last weekend.

A few members attending at John Brodie's station and had some success but overall some improvements could be made for next year. The Satellite group is inactive at this time.

Field Day

Stan Williams VA7NF will not be available this year and is suggesting that the committee be formed soon.

Club FoxHunt: Anton VE7SSD

May 21st has been chosen since it avoids Mother's Day and the Hyack Parade.

It is still on the Victoria Day long weekend but is our best choice for the Fox hunt this year.

Presentation on SDR: Stan Williams VA7NF

Many of the functions of the radio can be done via software rather than hardware, enter SDR (Software Defined Radio).

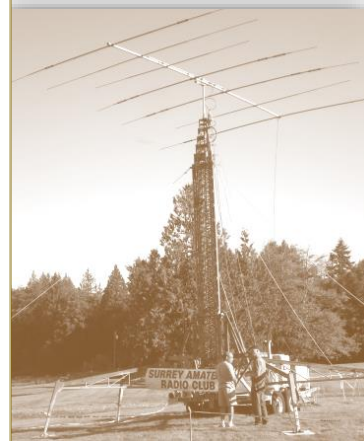
With SDR it's easier to have a remotely operated station if the SDR server is on the Internet. The control interface could be on a remote laptop or PC. Everyone that owns a smartphone also owns an SDR, it's a radio without knobs.

In the last 110+ years we have evolved only 9 types of radio architecture. Stan reviewed each of the types starting with the coherer, cat's whisker, spark gap, and all the way to super heterodyne and various modern SDR formats.

We ran out of time and the presentation ended before Stan was able to complete it. Possibly the remainder will be presented another time.

The meeting was adjourned at 9:05pm

~ Minutes prepared by Jeremy Morse VE7TMY



The **SARC Communicator** is published monthly except July and August for members of the Surrey Amateur Radio Club.

To subscribe, unsubscribe or change your address for e-mail delivery of this newsletter, notify **SARCcommunicator@outlook.com**

Non-members living in the Greater Vancouver area may receive one trial issue.

Beyond our membership area, annual Communicator subscriptions are available for a \$5 donation towards our Field Day fund.

SARC maintains a website at **www.ve7sar.net** that includes club history, meetings, news, photos and other information.

**Kalmar Koffee Klatch Reminder**

The SARC Weekly Koffee Klatch is on Saturday at the Kalmar Restaurant at 80th and King George Hwy in Surrey at 9:00 am. Bring your significant other, bring your family, see old friends and have fun.

The Burnaby Flea Market

The very popular Burnaby Amateur Radio Club Swap Meet is on Sunday, March 6th at the [Queensborough Community Centre](#) in New Westminster from 10:00am until 1:00pm. General Admission is \$6 but children 12 and under are free with an adult. More info at ve7bar.org/swap-meet/

On The Cover...

Of course the BIG news this month is that we have our own clubhouse. Thanks to the efforts of former Club President Mike Plant VE7AT and John Brodie VA7XB, the City of Surrey has agreed to grant us space at the former City Hall Annex.

This space will be transformed over the next few months, will offer a base of operations for club activities and may become a self-contained emergency radio site. The south facing slope of the new site is ideal for contest and training activities. The full story starts on the next page.



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Club News

John Brodie VA7XB

Genesis of a Club Station

The notion of having a training facility/clubhouse first arose with Mike Plant VE7AT when he became SARC President in 2007. In 2009, when I became President, the City of Surrey offered us the use of 2 side-by-side portable classrooms in the City Hall complex but we turned it down because of insufficient space for large antennas and lack of washrooms. Search and Rescue now occupies this space. Ever since, we have continued to nurture the idea of a clubhouse but nothing suitable has come our way. Re-enter Mike in 2015 as SARC President and the idea came back to life once again with a renewed urgency.

We always felt that if we were able to get the ear of the right person, we might have more success. We began this journey with Ken Woodward, Manager of Realty Assets for the City of Surrey. He had some familiarity with our needs from our discussions 8 years earlier but we reiterated what we hoped to acquire, in order of priority:

- 1) a place to set up and operate a HF/VHF/UHF radio station for training purposes, as well as for emergency use should the need ever arise;
- 2) a central storage location for all our gear which is distributed all over Surrey at fire halls and members' homes, and;
- 3) a place to hold meetings, training events and licensing classes. We explained that priority #3 might have to be waived if the venue offered is not sufficiently large to accommodate up to 35 people (this turned out to be the case).

Mr. Woodward suggested that we prepare a business cases to support our request, in the event something became available on

short notice and required the formal approval of Council. We did that and provided a copy to both him and Dan Barnscher, Deputy Fire Chief and Emergency Planner for Surrey.

Then in December 2015 we got in touch with MLA Marvin Hunt (honorary SARC member), who agreed to meet with us at his Constituency Office. Mr. Hunt was very encouraging and recommended that the need for a venue would receive the most favourable response from one or more Surrey Council members who had some understanding of the role SARC plays in emergency communication. Marvin, as a former member of council, had some definite suggestions.

In follow-up, Mike recalled that Councillor Mary Martin was an enthusiastic council representative at our Field Day event, so we got in touch with her and she agreed to meet with us in early January. We didn't have to justify our request in much detail because she was familiar with what SARC had accomplished at the most recent and previous Field Days.

A very flattering article which appeared on the Surrey Now website and later in the print version, as well as announcements and videos posted on Twitter, Facebook and You-Tube by John Schouten VE7TI certainly didn't hurt our chances of gaining support of Council.

Upon hearing the outline of our request, Councillor Martin immediately secured the involvement of Vince Lalonde, Surrey City Manager. Mr. Lalonde had some knowledge of what SARC does and expressed appreciation of the City for the dedication of SARC members and their determination to be fully-trained and ready when needed. He confirmed that



LEGEND

m² DENOTES SQUARE METRES

S.F. DENOTES SQUARE FEET

100 DENOTES UNIT NUMBER

 DENOTES BUILDING SERVICE AREA

0A DENOTES OCCUPANT AREA

 DENOTES FLOOR SERVICE AND AMENITY AREA

Ⓥ DENOTES MAJOR VERTICAL PENETRATION

 DENOTES ELECTRICAL PANEL

● DENOTES COLUMN

SURVEY STANDARD

DIMENSIONS AND AREAS ARE IN

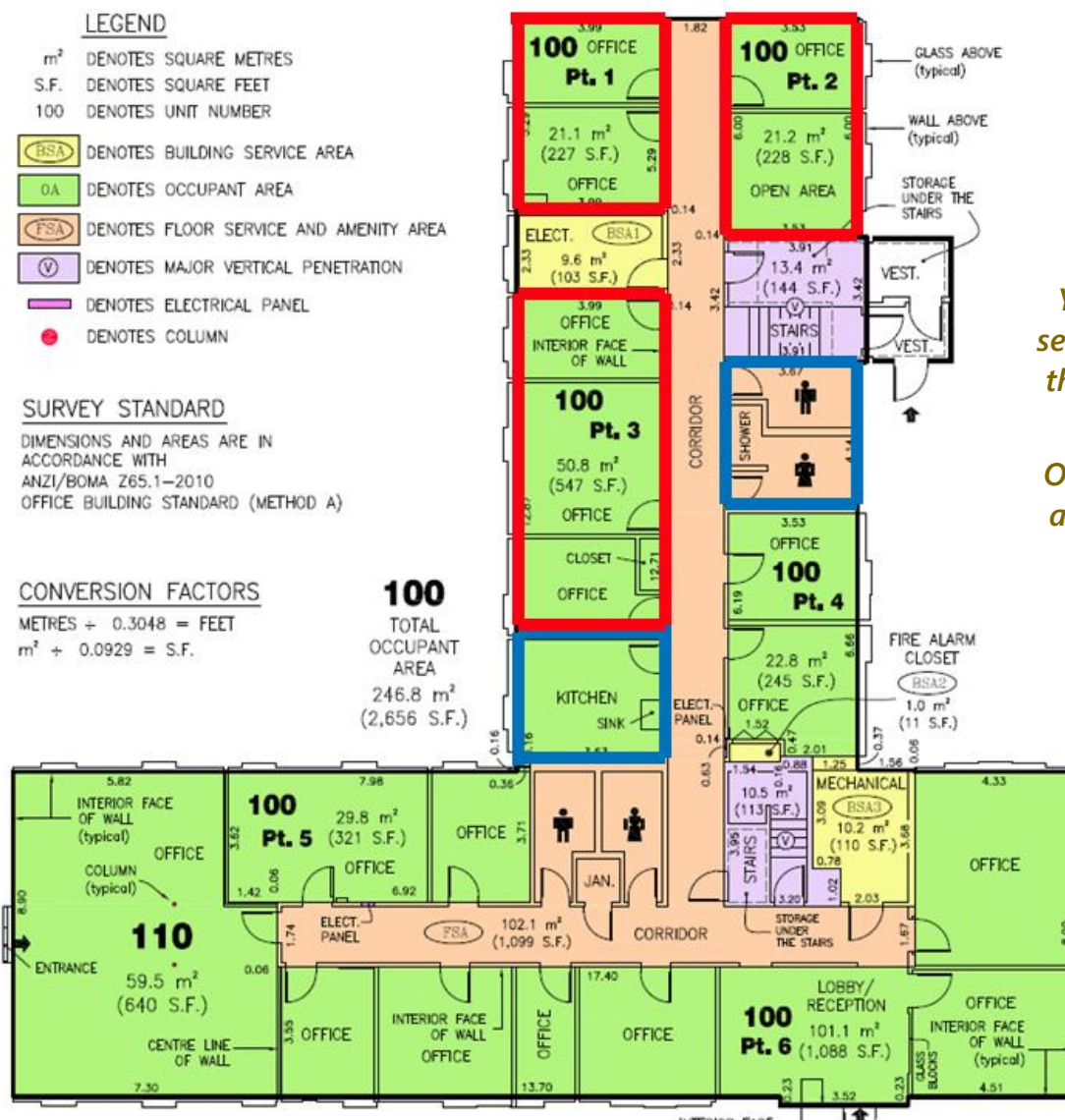
ACCORDANCE WITH

ANZI/BOMA Z65.1-2010

OFFICE BUILDING STANDARD (METHOD A)

CONVERSION FACTORS

METRES \div 0.3048 = FEET

$$m^2 + 0.0929 = \text{S.F.}$$


You may be interested to see the extent of the space that has been turned over to SARC for our use.

Our lease covers the three areas on the ground floor shown in red.

he supported our request and would see what could be done.

We anticipated resistance from some quarters because our proposed venue might be considered redundant with the well-equipped radio room already provided by the City at Firehall #1. However, we explained that the radio room, as good as it is, suffers from 3 fatal limitations:

- 1) it is too small for training purposes;
- 2) the site cannot accommodate large antennas, and;
- 3) access is limited to times when fire hall staff are available, and often they are not available due to callouts.

Within 2 weeks of our meeting with Councillor Martin and the City Manager Lalonde, we received a phone call to say that something may be available. Various options around the City were discussed but the one that was settled on as being most suitable was vacant office space at the former City Hall. Mr. Woodward and his assistant, Judith Strega, Property Agent, met with us on site to conduct an inspection.

Facilities at City Hall are gradually being leased out to the federal government for the most part, but the North Annex (formerly used by Surrey Bylaw Officers) is mostly empty. We were offered several

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*(Continued from page 5)*

rooms on the lower floor. On our second inspection we revisited the floor plan and chose a different area of the building which now gives us more space and better access to outdoor antennas.

We didn't have to think about it very long as the benefits of this site were obvious.

Mike has already described to the membership what this site has to offer. Since early February we have been meeting with Mr. Woodward and Ms Strega and other City staff to discuss our needs and finalize planning for an early move-in. In the meantime, Mike has identified a source of some free furniture. We have also applied to Shaw for Internet access in the form of a community service grant. By the time you read this, a license of occupation will have been signed giving us use of about 1000 square feet.

There will be many challenges to overcome such as providing adequate security for our equipment, safely placing and utilizing our large towers and antennas, erecting wire antennas into the large grove of tall trees nearby, getting feedlines through the building envelope and other lesser matters. A lot of work will be required to get set up and operating so we will need club members to pitch in and help.

All space offered is on the ground floor. Current thinking is to have one or more radio rooms for HF/VHF/UHF, including the capability for remote HF operation. A microwave link to BC Warn network is on the wish list. One of the smaller rooms would be used for secure storage of equipment and another room would be a workshop for construction projects. The largest space, open to the corridor, would be for socializing. Washrooms and a kitchen are part of the common area and are very close to our rooms.

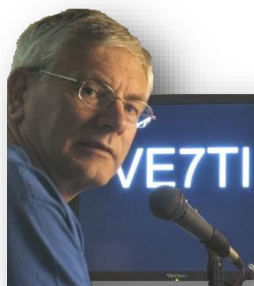
Outside in the parking lot will be a 20 or 40 ft. storage container (yet to be purchased) to house all the large items currently stored at firehalls, at Anton James's QTH and at the homes of other members. Also in the parking lot will be one of our towers with a tri-band beam on top, suitably protected from vehicle traffic. The grassed area adjacent to the east side of the building is shaded, private and ideal for holding a barbeque or outdoor social events.

~ John Brodie VA7XB



The restaurant about a 5 minute walk from the clubhouse

**More photos on
page 24**



Back to Basics

John Schouten VE7TI

From The Basic Question Bank

Question B-002-001-004

What is the purpose of a repeater time-out timer?

A repeater time-out timer, also commonly referred to as 'the alligator' has several functions. Repeaters have a time out function that will shut down the transmitter if the repeater is held on for a preset length of time (normally three minutes). This ensures that if someone's transmitter is stuck on for any reason, it won't hold the repeater's transmitter on indefinitely, possibly overheating it and causing damage.

When a ham is talking and releases the push-to-talk (PTT) switch on their radio, the controller in the repeater detects the loss of carrier and resets the time-out timer. When the timer is reset, the repeater sends out the courtesy beep. If you wait until you hear this beep (normally a couple of seconds), before you respond, you can be sure that you pause a suitable length of time. After you hear the beep, the repeater's transmitter will stay on for a few more seconds before turning off. This is referred to as the "hang time". The length of hang time will vary from repeater to repeater but the average is about 2 or 3 seconds. You don't have to wait for the "hang time" to drop before keying up again, but you should make sure that you hear the courtesy beep before going ahead.

If you don't wait for the beep, and do not allow the time-out timer to reset, or run on longer than the timer is set for, you will time-out the repeater and you will have been caught by the alligator. The repeater will stop transmitting with the result that you are now using simplex. The repeater will not function again until you allow the timer to reset.

When you are using the repeater, leave a couple of seconds between exchanges to allow other stations to join in or make a quick call. This is not only a courtesy, but required by the regulations to permit someone with emergency or priority traffic to use the repeater. Like most things in life, a little common sense goes a long way.

When using a repeater, be mindful of the fact that many others may be listening. Don't say anything on the air that you may regret later. If in doubt, don't say it! Keep your conversations brief. No one likes to have someone monopolize a repeater for hours on end.

The correct answer to this question therefore is "It interrupts lengthy transmissions without pauses"

~ John VE7TI

Most repeaters have a "Courtesy Beep" that will help in determining how long to pause. The courtesy beep serves two purposes, a repeater timeout function and it allows other to join in or make a call.



Digital Modes...

Can you identify the various digital modes when you hear them? Here we have a site that trains us to decode what we may hear: http://www.w2sjw.com/radio_sounds.html

A wide-band WebSDR that you can listen to: http://www.w2sjw.com/radio_sounds.html

You can turn Raspberry PI into a versatile radio transmitter: <http://hackaday.com/2015/11/04/rpitx-turns-raspberry-pi-into-versatile-radio-transmitter/>

Now you can use your Apple computer to access D-STAR:

<https://itunes.apple.com/us/app/buster/id1060175273?ls=1&mt=12>

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*Various
Ham tidbits
from
around the
globe*

Amateur 'MESH' Networks

Challenging The Big Boys

Toppling - or at least subverting - a telecom monopoly is the dream of many a person, who are fed up with bait-and-switch advertising campaigns, arbitrary data caps, attacks on net neutrality, overzealous political lobbying, lackluster customer service, and passive-aggressive service cancellation experiences that are a common experience of simply being a broadband internet customer these days.

The hams at NYC Mesh are actually doing something about it.

Read the full story at:

<https://motherboard.vice.com/read/how-a-diy-network-plans-to-subvert-time-warner-cables-nyc-internet-monopoly>

*~ Thanks to Stephen, G7VFX
for spotting this item*

Web-based Satellite Monitoring

I was wanting to check what the activity was like for the ARRL VHF and up contest that is on today (Saturday) and came across this web SDR that is set up to listen to the 2m, 1.25m, and 70cm bands where amateur satellites are. And within 60 seconds I heard one! I'm not sure which one as all I heard was Morse code gobbledygook! But it was clearly headed away from the SDR as the pitch got lower and lower and then cut out going below the horizon. Check it out.

<http://w2.noip.us:8901/>

~ Thanks to Sheldon VA7XNL

LED bulbs: Electromagnetic Interference Tests

The Swedish national amateur radio society SSA reports that December 2015, measurements were

taken of the RF interference generated by 11 different types of LED lamps

Only one, 38-23717, exceeded the EN 55015 limit. This has been reported to the Safety Board.

New EMC measurements on LEDs - in Google English

<http://tinyurl.com/SSA-LED-EMI-2015>

PDF's of the Conducted EMI Test Reports are at <http://www.ssa.se/sektioner/emc/led-produkter-som-ssa-anmalt-till-elsakerhetsverket/>

A New Life For Packet Radio?

Using digital modes (including Packet) for emergency communications (a pdf document): <http://www.va3rom.com/docs/VHF Packet Radio.pdf>

Ham Radio Course For iOS And Android

The Australian Radio & Electronics School (RES) has made available a free amateur radio licence course App for Apple and Android devices.

The applications were made possible by sponsorship from the WIA in cooperation with RES. Both applications once downloaded and installed require no internet connection. In the iOS version the videos are download once only as needed and no further downloading required. Both courses are supported by RES. Both courses are the same and comprise of easy to follow instructional videos.

This short course is suitable for about 11 years and up.

Apple iOS devices - iPad / iPhone

<https://itunes.apple.com/us/app/amateur-radio-foundation-course/id1077291042>

Android link at

<http://www.res.net.au/index.php?cmd=app>



Build It Yourself!

Joe Leggio WB2HOL

Constructing A Tape Measure Yagi

This antenna evolved during my search for a beam with a really great front-to-back ratio to use in hidden transmitter hunts. This design exhibits a very clean pattern and is perfect for RDF use. It trades a bit of forward gain in exchange for a very deep notch in the pattern toward the rear. (You could optimize the design for more forward gain, but at the expense of a really good notch in the pattern toward the rear.) It is a design that can be constructed using only simple hand tools (no machine shop needed) and still perform well. It has been duplicated several dozen times by other local hams and has been successfully used as a club construction project.

When I designed this antenna I had one basic idea in mind. It had to be easy to get in and out of the car when hunting for a hidden transmitter. This would be accomplished by the use of steel "tape measure" elements. These elements could fold easily when fitting the antenna into my car and yet still be self supporting. I decided to use three elements to keep the boom from getting too long.

Another of my design goals was to use materials that were easy to obtain. I chose to use Schedule-40 PVC pipe and fittings available at my local hardware store for the boom and element supports. These kept the cost for the antenna very low. The element supports consist of PVC crosses and tees.

When I first built this beam I found it needed a matching network of some kind to have a low SWR. My first attempt was a Gamma match. This was unwieldy. The driven element could barely handle the weight and the Gamma match itself was not very flexible. The best matching network turned out to be a "hairpin match." This is simply a 5 inch length of wire that is connected across the feed points of the driven element. The antenna has some capacitive reactance without the matching network. The 5 inch length of

wire has just enough inductance to cancel the capacitive reactance. This resulted in a better match than anything else I had tried.

The wire I used for the hairpin match was enamel insulated 18 gauge solid. Other hams who have duplicated this beam have used just about anything they had on hand. 14 gauge house wire works well, so does a length of 22 gauge hookup wire. It does not seem to matter if it is stranded or solid, use whatever you have available. This results in a very good match across the two meter band once you have adjusted the distance between the halves of the driven element for minimum SWR. (1 inch apart on my prototype).

I used a pair of shears to cut the tape measure elements to length. An old pair of scissors will probably do as well. No matter how you cut the elements be very careful. Those edges are very sharp and will inflict a nasty cut if you are careless. Use some sandpaper to remove the really sharp edges and burrs resulting from cutting the elements to size. I put some vinyl electrical tape on the ends of the elements to protect myself from getting cut. I encourage you to do the same. It will probably be best if you round the corners of the elements once you cut them. Wear safety glasses while cutting the elements. Those bits of tape measure can be hazardous.

The RG58 coax feedline is connected directly to the driven element. No matter what method you use to attach the feedline, make sure you scrape or sand the paint off the tape measure element where the feedline is attached. Most tape measures have a very durable paint finish designed to stand up to heavy use. You do not want the paint to insulate your feedline connection.

Performance Predicted by YAGI-CAD

GAIN	7.3 dBd
Front-to-Back Ratio	>50 db
3 db Beamwidth E	= 67.5 degrees
3 db Beamwidth H	= 110 degrees

Since I had never seen any plans for an antenna using elements made from 1 inch wide steel "tape measure," I had to do the design myself. To assist in the design I used a shareware computer aided Yagi design program written by Paul McMahan VK3DIP. It allowed me to optimize the antenna for the cleanest pattern combined with the best front-to-back ratio.

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(Continued from page 9)

If you are careful, it is possible to solder the feedline to the element halves. Care must be taken since the steel tape measure does not solder easily and since the PVC supports are easily melted. You might want to tin the tape measure elements before mounting them to the PVC cross.

If you decide not to solder to the tape measure elements, there are two other methods that have been used to attach the feedline. One method employs ring terminals on the end of the feedline. The ring terminals are then secured under self tapping screws which hold the driven element halves. This method does not allow you to tune the antenna by moving the halves of the driven element. 6-32 bolts and nuts could be used if holes are drilled in the elements near the ends. If the bolt heads are placed nearest the PVC fitting, you could secure ring-terminals with nuts and lock washers. Another possibility is to simply slide the ends of the feedline under the driven element hose clamps and tighten the clamps to hold the ends of the coax. I know this is low-tech, but it works just fine.

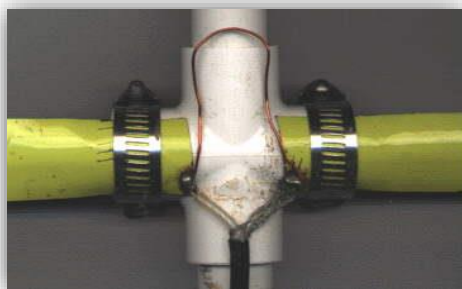


Figure 1 - Driven element support construction

Stainless steel hose clamps are used to attach the driven element halves to the PVC cross which acts as its support. This has the added benefit of allowing you to fine tune your antenna for lowest SWR simply by

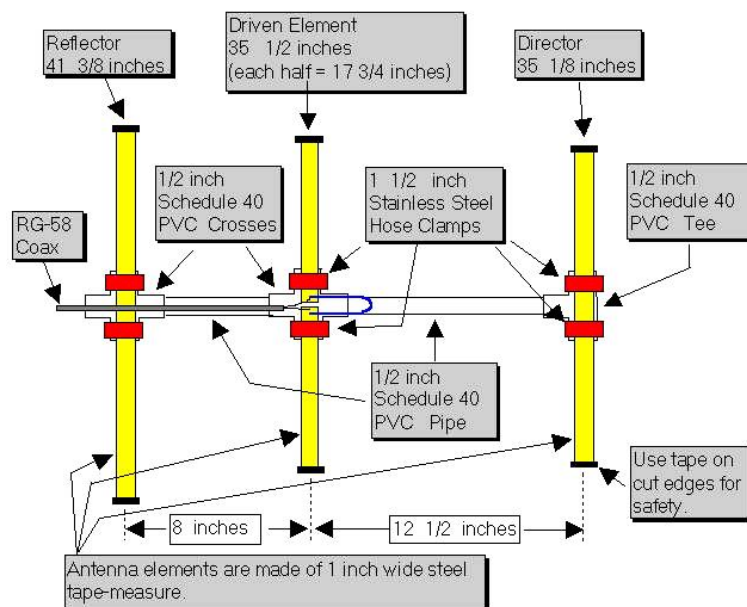
loosening the hose clamps and sliding the halves of the driven element either closer or further apart. By using the dimensions specified, I found that the SWR was 1:1 at 146.565 Mhz (our Fox-Hunt frequency) when the two elements were spaced

approximately 1 inch apart. Figure 1 shows the method used to attach the driven element to the PVC cross.

I used 1 1/2 inch hose clamps to attach all the elements on my prototype beam. Others who have duplicated my design have used self tapping screws to attach the elements to the PVC crosses and tees. Performance is the same using either method. The screws are much less expensive but they do not hold the elements as securely. If you do not use 1/2 inch PVC fittings but instead use 3/4 inch, make sure the hose clamps you buy are large enough to fit.

If you wish a slightly neater looking beam, use the self tapping screws. If you do not mind spending a few more dollars for the hose clamps, use them instead. If I were to build another beam I would use screws for the director and reflector, and hose clamps for the driven element. That would give me the best of both methods.

Rubber faucet washers have been used by some builders between the tape measure element and the PVC fittings on the director and reflector. These allow for the tape to fit the contour of the PVC fitting and will make the antenna look better. Now you know what to do with those



washers left over from the assortment you once purchased; You know the ones I mean, the washers that do not fit the faucets you have in your house. If you are an apartment dweller, ask around, these things are stashed in almost every homeowners basement or garage.

Construction:

Cut a length of tape measure to 41 3/8 inches. It will be the Reflector element. Cut two lengths of tape measure to 17 3/4 inches. These will be used for the Driven element. Cut one length of tape measure to 35 1/8 inches. It will be used for the Director. Once you have cut the tape measure to length, put vinyl tape on the cut ends to protect yourself from the sharp edges. You will want to scrape or sand off the paint from one end of each of the driven element halves so you can make a good electrical connection to the feedline.

If you are planning to solder the feedline to the driven elements it is best to tin the elements first before attaching them to the PVC cross. If you don't, the PVC will melt as you apply heat to the element. It would be a good idea to also take the time to form the wire used for the hairpin match into a "U" shape with the two

legs of the "U" about $\frac{3}{4}$ inch apart. Tin the ends of the hairpin if you plan on soldering it to the driven element. If you tin $\frac{1}{4}$ inch of each end of the hairpin it will leave $4\frac{1}{2}$ inches to shape into the "U".

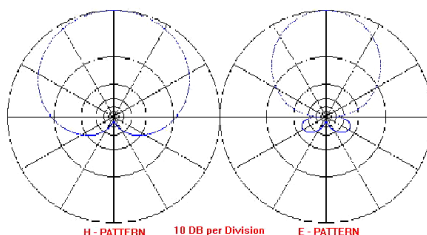
You will need to cut two lengths of PVC pipe to use as the boom. One should be cut to $11\frac{1}{2}$ inches. It is used to form the boom between the Director and the driven element. The other piece of PVC should be cut to 7 inches. It will be used between the Reflector and the Driven element. Just about any saw will cut through the soft PVC pipe. I used a hacksaw. When we mass produced this antenna as a club project, we marked the pipe and used a portable jig saw to cut the lengths in assembly line fashion. It took longer to measure the pipe than to actually make the cuts. Since the pipe is available in ten foot lengths, you can make a few beams from a single 10 foot length. In any case, you might want to cut a few extras lengths for your friends. They will want to duplicate this once they see your completed antenna.

At this time you can pre-assemble the PVC boom, crosses and tee which will support the tape measure elements. I did not use any cement or glue when I assembled mine. The PVC pipe is secured in the fittings with a friction fit.

The hose clamps I used are stainless steel and have a worm-drive screw which is used to tighten them. They are about $\frac{1}{2}$ inch wide and are adjustable from $\frac{11}{16}$ inch to $1\frac{1}{2}$ inch diameter. Attach the tape measure elements to the PVC fittings as shown in the accompanying drawing. It is normal for the Reflector and Director elements to buckle a bit as it is tightened to the PVC Tee and Cross. You can eliminate this buckle if you use the washers and self tapping screws to attach these elements instead of the hose clamps. I do not think the beam will withstand as rough a treatment as when hose clamps are used.

How does it perform?

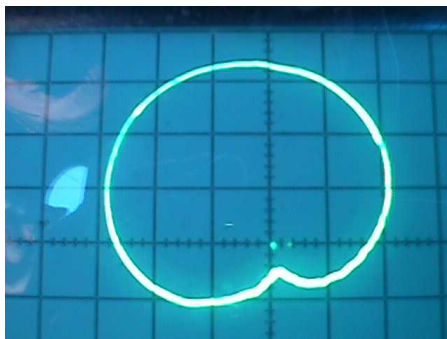
Once you have completed your beam you probably will be interested to see if it performs as well as the computer predicted. The SWR should be less than 2:1 across the entire two meter band. The front-to-back ratio is predicted to be very good with the antenna exhibiting a very deep notch in its pattern towards the rear.



The YagiCad 4.1 program produced these antenna pattern graphs showing the pattern you should expect. If you would like to experiment a bit with this program, the yagi specification file for this tape measure beam is available for [download here](#). Simply download the YAGI-CAD program and put the tape measure beam design file in the same directory. You will then be able to experiment with the design.

How does the tape measure beam "measure up?"

WB4SUV and WA6EZV used a storage scope connected to a copy of this antenna constructed by KC8FQY and provided the following picture of the actual antenna pattern. I am very happy to see that the computer prediction of a clean pattern with a really great front-to-back ratio was accurate. What do you think?



Summary

This beam has been used on Fox-Hunts, on mountain tops, at local public service events, outdoors, indoors in attics, just about everywhere.

The SWR is typically very close to 1:1 once adjusted. Front to back performance is exactly as predicted.

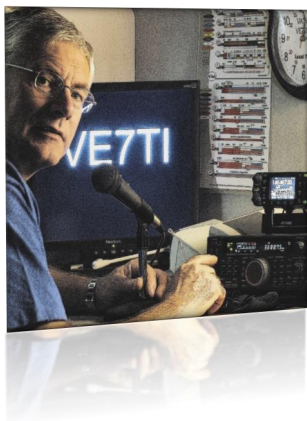
The null in the rear of the pattern is perfect for transmitter hunts. When tested using a sensitive field strength meter and a low powered fox transmitter, full scale readings were seen from a distance of ten feet. With the same field strength meter I was able to point the antenna away from the transmitter and move the reflector element to within a few inches of the transmitter antenna and still not see a reading. I don't have the facilities to verify a 50 db notch as predicted by the Yagi-Cad software but it sure seems close. The flexible elements have taken a lot of abuse. My antenna has seen a lot of use and has held up quite well. Best of all, when on a fox-hunt, this beam is a breeze to get in or out of the car.

I have built several of these and used them for satellite work, Fox Hunting and as a great portable antenna with good gain. Give it a try, mine cost about \$5 to make.—Ed.

Guest Columnist
Joe Leggio has
a web site at URL:
<http://theleggios.net/wb2hol/projects/rdf/rdf.htm>

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March 2016



QRM

...from the Editor's Shack

*Do you have a photo or bit of club news to share?
An Interesting link?*

*Something to sell or something you are looking for?
eMail it to [SARCcommunicator @ outlook.com](mailto:SARCcommunicator@outlook.com) for inclusion in this column.*

I have notified the Kalmar that we will not be there for Christmas lunch in 2016 as we are now at 82 members and clearly, after the 8 week course, we will be over the 100 mark.

The alternate location has been booked for Dec 10th at 11:30 with lunch at Noon.

~ Mike VE7AT

SARC Is Planning A Basic Course

If you know of someone looking to take the Basic qualification course to obtain their Amateur Radio license, we are offering a comprehensive 8-week course starting Tuesday March 29 and will be held at the Surrey Fire Training Center on 64th Avenue.

At The Next SARC Meeting

Your March presenter, Adam M. Farson VA7OJ, was born in the UK, and was raised and educated in South Africa. After earning a BSEE at the University of Cape Town, he worked for Racal in South Africa from 1964 to 1967 as an RF design engineer. He was involved in some interesting, advanced projects - a VHF FM/SSB tactical ground radio system for the Ministry of Defence, and solid-state HF transceivers for PMR ("bush radio") applications. Adam writes: "We had a 25W manpack and a 100W mobile, both of which used TV line-output transistors with Ft > 100 MHz in the transmitter PA and driver".

Adam emigrated from South Africa in 1967, then spent 3 years at CERN as an RF design engineer, working on a modulation system for a 10kW 9.5 MHz HF power generator feeding RF power to a proton accelerator. This project served as the thesis for his MSEE (University of Cape Town, 1971).

After CERN, Adam returned to the telecom industry and worked for various multi-nationals in the satellite and wireline telecom fields, culminating in a 20-year stay as a systems engineer at Siemens. He was based in Boca Raton, Florida but travelled extensively to North American and international assignments, including a year in Munich and several months in Tokyo. Adam's main tasks were systems verification and compliance engineering, mainly in the areas of telephone trunking, signalling and transmission.

Adam retired at the end of 1999, and moved to BC for family reasons.

He is also a licensed radio amateur with the Canadian Advanced Certificate (VA7OJ) and the US Extra Class Licence (AB4OJ), as well as an FCC General Radiotelephone Operator's Licence. Adam was first licensed as ZS1ZG in 1962.

He is now applying some of his engineering training to the amateur radio hobby, especially in the area of radio equipment testing. Upon retiring, Adam started building up a comprehensive RF lab; he started researching noise power ratio testing of HF receivers in 2009 and now tests analogue and SDR transceivers.

Scope of the presentation on World War II era radio.

General

- Manufacturers
- Technology
 - Tubes & components

Land-based & naval systems

- Freya (land)
- Seetakt (naval)
- Würzburg; fighter control with Freya & Würzburg

Airborne systems

- Lichtenstein (airborne intercept)
- Berlin microwave PPI system (based on British H2S)
 - Cavity magnetron problems

Should be an interesting evening, hope to see you there.



Page 13—News You Can Lose

The Lighter Side of Amateur Radio

Club Newsletter Causes Controversy

By K5KVN, on the scene

LAZY COVE, CALIFORNIA — A local radio club's idea to encourage inactive members to get back on the air is making waves in the amateur radio hobby.

The club first started publishing their new "silent key" section in their newsletter last month. Since then, newsletter editor Paul Ramond has endured dozens of phone calls, hundreds of emails and heated exchanges on the local repeater.

"Look, it was supposed to be a way for us to list members that hadn't been heard on the local nets in a while, that's all," explained Ramond. "I guess we didn't put much thought into what we called it."

A "silent key" is a phrase used by ham radio operators to signify when someone has died. Several people whose names appeared on the list were upset, to say the least.

"My wife received a phone call on Tuesday asking if she was selling my radio gear now that I had passed. It was very traumatic for her," said Wilford Draymeyer, one of the hams on the list.

The club is taking the criticism in stride and plans to use what they hope is a less controversial name for the feature in next month's newsletter: *List of Inactive Dudes (LIDs)*.

~ Ham Hijinks



Otto Eppers' QSL Card Of The Month.
Don't know Otto? See The Communicator September



Does this count as texting while driving?

March 2016



Tech Topics

Adam Foley N1RKW

Getting Started...

Adam Foley N1RKW has been around ham radio most of his life, but didn't smarten up and get his license until 2008. Since then he has gone on to great heights (the 12' high roof of his old house, and the 3rd floor apartment he's in now), and recently decided to take up writing a monthly column about ham radio and electronics, two of the subjects he knows a little bit about (but not much). He lives in Laconia, NH with his incredibly tolerant wife and equally tolerant son.

One of the more interesting things about this great hobby of ours is our use of the word “shack”. This word, in the context of ham radio, refers to the primary place where we operate our radios. This can be at an office desk, in an attic above a garage, in a favorite easy chair in the den, in the front seat of a car, on a shelf in a cellar surrounded by so many cobwebs that you’ll be wondering when to expect Frodo and Gollum to come through, in a gleaming, majestic room devoted to all things radio and nothing else, or even in an actual shack in the back yard, which is actually the origin of the word as it is used by hams. Early radio equipment wasn’t terribly nice to have inside a house, so it was usually relegated to an outbuilding of some sort, the radio shack.

“The shack” can also refer to not only the location we operate from, but also the equipment we use to do so. For instance, one might say, “My shack consists of a Kerchunk-3000 transceiver and a N1TWIT dipole antenna.” For hams who have been licensed since the late Jurassic period, setting up a shack is second nature. But what about the hams who just got their license? Or even those who have had their license for a long time but haven’t had the opportunity to set up a shack and would now like to do so?

Well, everyone needs to start somewhere, so pull up an easy chair, stool, car seat, or rock and let’s look at what kind of things go in to making a reasonable ham shack. Get comfortable, because this is my most hideously long-winded article to date. A cup of hot chocolate might help you keep awake long enough to finish reading this.

These days, most new hams start with one of those amazingly inexpensive handheld radios from China, made by companies like Baofeng and Wouxun (neither of which

is actually pronounced like you think it is). These neat little radios come in at around \$35, an amazing price for a dual-band handheld radio. It’s not until you start trying to live with these radios that the reason for the low price becomes apparent. Step one is to replace the antenna with something that actually works. A quarter-wave whip seems to be the popular choice, and they do seem to improve the performance of the radio by some degree. Step 2 is to get a programming cable so that you can figure out how to program the little buggers without needing an electronics engineering degree. Fortunately, there is some free programming software, called [CHIRP](#), that can be easily downloaded for free. Did I mention that it is free? Since the total cost of the radio and these almost necessary add-ons is still less than you would end up paying for a typical Japanese radio of similar capabilities, this is not a bad place to get started.

Basically, you can end up with a modest but functional ham shack for less than \$60, something that was nearly impossible a few years ago, even looking at used equipment. It’s a good time to be a ham!

Handheld radios are great, but they have their limitations. Handhelds have limited transmit power and don’t receive quite as well as their larger brethren do, so they are best for working nearby repeaters or nearby people. They also aren’t designed for long rag-chews (a casual radio name for a casual radio conversation), and tend to get very hot when pushed toward their limits. Excessive heat tends to cause bad things to happen to electronics, so if you like to talk (as most hams do) it is a good idea to invest in a larger radio before the magic blue smoke escapes from your \$35 paperweight that used to be a decent handheld radio.

So what's next?

The next step up from a handheld is a mono-band or multi-band VHF mobile radio. If your shack is in your car, all you need to add after properly installing the transceiver is a decent mobile antenna. However, most of us at this point are looking to set up a shack in our home, shed, or garage. It's at this point in the hobby that we need to look seriously at investing in proper equipment for the safety of us, the people around us, and the longevity of our equipment. I am referring here to station grounding. Properly grounding your station will help prevent damage from electrical charges that can often build up during storms and at pretty much any other time that the air is moving. This will NOT help in the case of a direct or nearby lightening strike. In that case all bets are off. However, having a properly grounded shack will always be better than having an ungrounded one. Fortunately, grounding for a VHF/UHF station can be fairly easy to do. Just drive an 8 foot long ground rod into the ground at the point closest to where your antenna cables come into the house. Run heavy wire from that ground rod to all of the ground points in your shack, to your house electrical ground, and to your antenna. This step should, of course, be performed by a qualified electrician. Do not daisy-chain the ground lead, use individual leads for each piece of equipment and tie them into a common grounding bar.

Grounding is a subject that can occupy an entire article all by itself, and I am not expert enough to write that article, at least not yet. If you have any questions about proper station grounding, ask an experienced ham to help you, look online, or to your bookshelf. The ARRL publishes a lot of great books on things like this, and it might be worth your while to take a look at what they have to offer. Most importantly, do things properly and safely. Now that the crummy, boring health and safety stuff is out of the way, on to the fun stuff!

The next step is to decide what kind of a radio you want to use as your primary transceiver. The least expensive mobile radios are single-band 2 meter VHF radios.

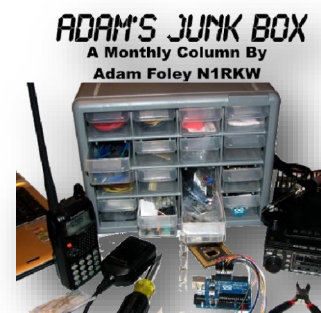
These generally run between \$145 and \$220 depending on which brand and which feature set you want. These radios, coupled with a good antenna system, should allow you to work any 2 meter repeater within a wide range that isn't otherwise blocked by blocks of rocks. Radio signals won't go through granite, which brings me to my next point:

Multi-band radios. 2 meters (144 MHz) is a great band and for many of us it's our primary operating environment. However, there are a number of other bands available to hams with a technician class license, including 6 meters (50 MHz), 70 centimeters (440 MHz), 1.25 meters (222 MHz), portions of 10 meters (28 MHz), and any ham band from 33 cm (900 MHz) to 500 nM (600,000,000 MHz) which you might recognize as visible light. Any one of these bands may work when others won't. Radio propagation is weird, and does pretty much whatever it pleases regardless of science or common sense.

Here in central New Hampshire, the most active VHF bands are 2 meters and 6 meters. Unfortunately, the vast majority of multi-band mobile radios only cover 2 meters and 70 cm. There's nothing wrong with 70 cm, it is a good band and you'll find it handy to have coverage in that part of the spectrum as there is some local activity there. However, there are a lot of interesting things that happen on 6 meters, so you may decide that it will be worth your while to invest in a radio that includes that band.

You have several options to choose from, and the most common one is to get a multi-band radio that includes 6 meters. Unfortunately, your choices will be limited. The Yaesu FT-8900 is a fantastic radio that covers 10m, 6m, 2m, and 70 cm. It's only shortcomings, in my opinion, are it's high price (close to \$500) and the fact that it only has the FM mode. For technician class hams, that means you won't be able to access 10m with it, other than to listen, as your portion of the 10m band is in the SSB (single side band) portion of that band. However, these are not deal-breakers in my opinion, and so I bought one of these radios myself and have been very happy with it. There are a

The next step up from a handheld is a mono-band or multi-band VHF mobile radio.



Guest Columnist Adam Foley N1RKW is a member of the Central New Hampshire Amateur Radio Club and contributes a monthly column "Adam's Junk Box" to their newsletter, also called The Communicator.

March 2016

The next option would be to invest in an all-band, all-mode radio. Radios like these are similar to conventional HF radios, but they include 2m and 70cm in addition to the HF bands

couple of newer Chinese radios that have similar features to the FT-8900, but I have never used one so I can't really offer much in the way of advice about them.

The next option would be to invest in an all-band, all-mode radio. Radios like these are similar to conventional HF radios, but they include 2m and 70cm in addition to the HF bands (1.6 to 30 MHz) and 6m that are typically included in this class of radios. They also tend to be a little smaller than their HF-only brethren, and they will have a smaller feature set. Both of these things are advantageous as they take up less space and cost considerably less, though they are still quite an investment. They start around \$650 for low-powered models (QRP, or low power operation, is a subject for a whole other article. It can be very fun and interesting, but is not necessarily a good place to get started in ham radio), but I recommend getting a radio that can put out at least 50 watts on 2m and 100w on HF. For my own shack, and indeed for my very first multi-band radio, I chose the Yaesu FT-857D. This is an excellent radio in a compact chassis with an excellent feature set. These radios are currently priced around \$825. As far as I know, the FT-857D, and it's slightly bigger brother the FT-897D, are the only 100 watt, all band, all mode transceivers available for less than \$1000. The Icom IC-7100 (*photo below right*) is similar and adds D-Star digital voice capabilities, but costs a bit more at just under \$1200. These radios are a hefty investment, but they can be a good choice for a ham that wishes to have a future-proof shack so that license upgrades don't necessarily mean radio upgrades as well. Still, \$1000 is a lot to throw at what for many of you is a brand new hobby.

It's no wonder that most of us start out on 2 meters where the radios are cheap. However, if 6 meters is a must, there is one more option: A mono band 6 meter radio. The only one that I am aware of currently is the Alinco DR-06 that runs about \$240. Alinco makes a range of other mono-band radios for 10m, 2m, 1.25 cm, and 70 cm, so you can pick one to suit your needs. Of course, by the time you've bought individual radios for each band, you will realize that a multi-band radio is

much more efficient in terms of both space and cost. It's also easier to hook a single multi-band antenna up to a single multi-band radio rather than trying to convince your spouse that your house looks better now that it looks like an up-ended spring rake.

Which brings me to my next point: antennas. This is an area that can occupy multiple articles all by itself. I won't tell you which antennas you must use, because antennas are as varied as the hams that use them. They range from giant arrays taking up acres of space down to a wire coat-hanger bent straight and cut to length. There is no "correct" antenna. The right antenna is the one that works for you. I can, however, tell you which antennas work for me and then you can make your own judgments. My main antenna is a Diamond V-2000A tri-band vertical antenna (\$160). It covers 6m, 2m, and 70cm right out of the package with very good results on all three bands. I mounted mine on the top of a 25' TV mast and fed it with 40' of RG-213 coax. Coax is another subject that could occupy an entire article, but I will attempt to cover it later in this article. I also use the j-pole that I built for last's month article as a back-up 2m antenna, a homemade 6m dipole for 6 and 10 meter operation, and a G5RV wire dipole for HF. This setup works for me, but it might not work for you at all. I'm only sharing it as a single example of one shack. You may decide that a j-pole will make a great primary antenna and you don't need anything else. You might decide to dump \$15,000 into a tower with a giant yagi on top. You might decide to hang a wire from a tree. Whatever works for you is what's best.



Let me reiterate: What antenna setup you choose should be based on your own needs and wants. You should do some research, talk to other hams, ask questions of the folks down at Ham Radio Outlet (especially Steve K1SMD), and experiment as much as possible. I think you'll end up finding out that the best antenna is the one you made yourself.

Coax is an important subject that is often overlooked when setting up a shack, until it is realized that the only way the radio signals are going to get from the radio to the antenna is via a little black piece of 50 ohm wire. Loss is one of the most important considerations when deciding which coax to use. Coax is good, but it isn't perfect. Most coax is rated in loss per 100 feet at specific frequencies. For example, the RG-213 that I use a lot of (because I bought a bunch of it for cheap at NEARfest) loses 2.8 dB of signal per 100 feet at 146 MHz. That's nearly half of the signal! However, it only loses 1.5 dB at 50 MHz over the same 100 feet. It's also less lossy than most smaller diameter coax such as RG-58 which loses a whopping 6.1 dB per 100' of length at 146 MHz! Another important factor when choosing coax is price. Sure, we'd love to run hardline to all of our antennas, but there aren't many of us willing to re-finance our homes just to buy some coax. If you live within a budget just like the other 99.9% of the population, you will want to find a coax that fits your needs as far as both price and signal loss over the length you plan on running. Again, I recommend using the brainpower of other hams, especially those at HRO. One last thing: This may go without saying, but I'm saying it anyway. Be sure to use 50 ohm coax. Your 75 ohm TV coax just won't work properly because your radio expects to see a 50 ohm impedance at its antenna connection. Using 75 ohm coax will cause a mismatch (which shows up as high SWR) and may damage the radio.

In the previous long-winded paragraph I used dB quite a bit, which is a unit of measurement that I haven't previously explained. Let me see if I can sum it up without making a mess of it: dB or

decibels, is a way of measuring signal levels on a logarithmic scale. For example, if your signal increases by 3 dB, it has doubled. Unfortunately, dB is a concept I have a difficult time wrapping my head around, so I can't really give you a better explanation than that.

Something is missing in the ham shack at this point. Any ideas of what that might be? Here's a hint: Don't ever plug your radio directly into your household electrical receptacles, unless you wish to warm your hands over the roaring fire that used to be your brand new ham radio.

You need a 12 volt DC power supply. First off, the power supplies are actually designed to put out 13.8 volts DC (or thereabouts) to more closely match your car's electrical system, we just call them 12 volt power supplies for convenience. What size supply you get is entirely dependent on what kind of radio you plan on having in your shack. Power supplies are rated by the amount of current, or amperage, that they can provide. Unfortunately, they are usually rated by peak output, not continuous output. For example, if your radio draws 12 amps of current on transmit, you might think that a 12 amp rated supply would be okay. That 12 amp rated supply, however, can only supply 12 amps for a very short amount of time and would soon expire in a cloud of acrid blue smoke. The most that 12 amp rated supply can put out over extended periods of time is 9 amps. The example I used here is the Astron RS-12A power supply. So what we find out from this example is that you need to know 2 things in order to find the right power supply for your radio: The current draw of your radio during transmit, and the continuous current rating of the power supply. However, there is a simple shortcut here: In most cases, a 50 watt mobile radio will be perfectly happy on a 20 amp peak (16A continuous) supply such as the Astron RS-20A, and a 100 watt radio will need something a bit beefier, such as the Astron RS-35A which is rated for a peak current of 35 amps, 25A continuous. That being said, always check the ratings before matching a radio up to a power supply. There are

Power supplies are rated by the amount of current, or amperage, that they can provide.

Unfortunately, they are usually rated by peak output, not continuous output



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Thanks for taking the time to read this. I'm always open for questions, comments, suggestions, and cups of hot chocolate. I can be reached by email at my call at hotmail dot com. If writing my email address that way actually fools the programs that prowl the internet looking for such things, I'll eat my hat.

several brands of power supplies to choose from, but Astron seems to be the brand most commonly used with ham radios. Their supplies are robust and reliable, so they tend to be a good investment.

So here's our HRO shopping list for our first-time shack setup: Radio, antenna, coax, power supply, and various sundry items such as coax connectors and cable ties. You will also need a grounding system, which can be obtained at a home center or electrical supply house. Again, consult with an electrician if you are not trained to deal with such things. Lastly, you need a comfortable chair and a tolerant spouse if you plan on operating inside the house.

If you are reading this you have either skipped to the end, for which I don't blame you, or you have managed to stay awake through all 3,000+ words of my insensate ramblings. In either case, I thank you. I write these articles for you, the reader, and with the hope that I can pass along some tidbit of information or another that is useful somehow to someone. Please feel free to offer suggestions for future articles.

This article came about due to suggestions from Sam N1OVA and Curtis KA1DPZ.

~ Adam Foley N1RKW
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NSARC CW Course 2016

Tom Dunn, Chief Instructor for the North Shore Amateur Radio Club has announced a Morse Code Course developed by and taught by Keith Witney VE7KW.

While the primary objective is to prepare students for the Industry Canada Amateur Radio 5 WPM code exam, the course will also deal with how to prepare for the practical use of Morse Code from a casual to competitive level.

Morse code basically is not taught, it is practiced and students will be expected to dedicate 10-30 minutes EVERY day to practice. The classes will provide guidance on what tools and methods are available to learn Morse Code and provide assistance as required. For this reason, the classes are spread out to enable suitable progression.

The following Dates have been reserved.

- March 19 April 2 April 30 May 14

Registration and course introduction, Learning Method and Tools Progress Review, Speed accuracy development Sending, Preparing for the Exam, Going Forward past 5 WPM Exam and celebration!

The course fee will be \$50 and includes a Manual and course slides but not a practice key.

For further information, please contact:

Tom Dunn VE7TD tom.dunn@shaw.ca or Keith Witney VE7KW ve7mid@telusnet (604) 475-5254



The Contest Contender

John Brodie VA7XB

The BC QSO Party

The BC QSO party was a 12-hour affair between 8 am and 8 pm on Saturday, February 6th. Several eager participants signed up for the event. A few hours leading up to the contest were spent checking over all the equipment and its interfacing with the computer and N1MM logger+, the software of choice. The participants were Sheldon VA7XNL, Garvin VA7YEE, Rob VE7CZV and Elizabeth VA7ELA, who were asked to record voice macros ahead of time. The macros were all loaded up and tested well before the contest. Unfortunately, Kapila VE7KGK, had to bail out at the last minute due to work commitments. Our plan was to run at 100 watts. So all was in readiness by 8 am on Saturday. Or so I thought.

I am embarrassed to say that one thing I almost always do, but neglected to do this time, was to simulate a few contacts with the voice macros, and ensure they were being logged properly, then deleting them afterwards. The macros worked fine but I had failed to test before-hand the logging step of the procedure. An important lesson was reinforced: the start of the contest is no time to find out that N1MM is refusing to enter confirmed contacts in the

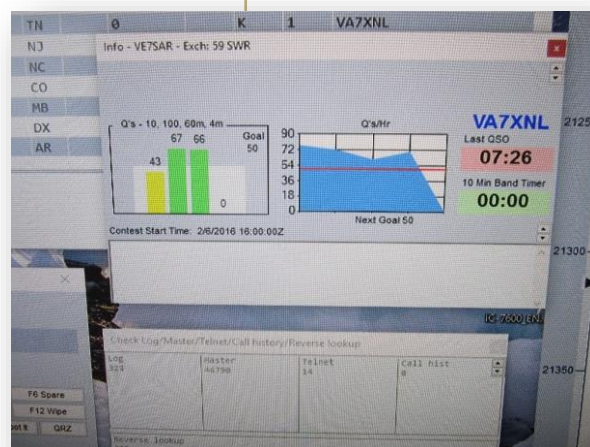
log. A quick work-around was called for; this continued throughout the contest and made for awkward logging. However, all participants were able to adapt without too much effort and, though it slowed down the pace somewhat, all persevered and we overcame the difficulty.

Total contacts for the team were 447 and claimed score was 105,930. I will not embarrass myself further by describing

the dumb error involved in setting up the log file. Thanks to those who put in such a great effort, especially our two vision-impaired members, Rob and Garvin. In my opinion, we must make more effort when our impending new club station is operational to find better ways to accommodate members with a handicap.

The BC QSO Party can be a very satisfying experience when things are going smoothly, as it is a rather relaxed, low-pressure event that at the same time offers an excellent opportunity to enhance operating skills and have fun. Even I personally was able to get some great runs in now that I have lost some of my trepidation about dealing with the confusion of pileups.

~John Brodie VA7XB



Left: Rob and Elizabeth

March 2016



Radio-Active

Jinty Reid VA7JMR



**Howard Ticzon
VA7HTZ**

When the writer visited Howard and his wife Edna at their home in Surrey there were numerous suitcases all packed and placed by the front door. This was because they were about to go on a long awaited 18 day vacation to Manila in the Philippines where they both were born and raised. All of Howard's family live in Manila and Edna only has a sister here in Surrey.

When Howard was as young as 3 or 4 years of age he was fascinated by his remote control toy car which he had been given for his birthday. He sees this as the birth of his interest in electronics. After graduating from high school he attended Don Bosco Technical College in Manila where he studied electronics and communications. As the college had an amateur radio club Howard participated in the club, eventually obtaining his Amateur Radio License which included Morse code. After graduating from college in 1997 he went to work for Astec Custom Power Manufacturer of design power supplies where he did component failure analysis. After working there for 3 years he went on to work for a local telecom company as a market officer for handset and SIMS until 2008. Howard travelled to Hong Kong and Singapore as part of his work

Edna and Howard married in 1998. She worked in administration for Novartis, a chemical company in Manila where she was a member of their amateur radio club and it was there that she and Howard met. Edna had her amateur radio license also with Morse code. She laughs when she says "I heard him on the radio before I met him" While on a visit to her sister in Surrey, before she married Howard, Edna says she says she fell in love with Canada and liked what she saw to the extent that she told herself that one day she would like

to live there permanently. When she was married she found Howard a little reluctant to leave his family and Manila and venture into the unknown in Canada, especially as both he and Edna had secure jobs. However, because of the economic and political situation in the Philippines they decided to immigrate to Surrey, BC. In Canada Howard connected with the Don Bosco Alumni in BC, who referred him to Alpha Technologies. After taking an entrance exam, Howard was employed by the company as a Quality Control Inspector. After 2 years he was promoted to Final Inspector for their power systems. After 4 years Howard left that job, deciding he wanted to improve his skills and pursue a career more in communications rather than electronics. He upgraded his skills by attending BCIT. At present he is exploring other options in communications. As soon as he returns from a much needed break with his family in the Philippines he will be job hunting. So folks, any leads on communication jobs, talk to Howard.



Radio Club House in the Philippines



Howard and Edna

Other interests Howard has are; web design and his fascination with the technology of the Internet in general. He also shares an interest in mountain and road cycling in the summer and he and Edna both have 2 bikes each. Howard and Edna cycled to raise funds for the BC Lung Association Bicycle trek for Life and Breath in 2013 and also as a fundraiser for Ride to Conquer Cancer.

Although Howard and Edna's first language is Tagalog they both spoke English before they came to Canada but of course it has improved with more constant use.

Howard's favourite aspect of amateur radio is contesting and Dx-ing which he also did in the Philippines at the radio club there, DX1DBT. When he came to Surrey he met a friend of Kapila called Barata at the Langley Club who put him in touch with Kapila which eventually led to Howard joining SARC. Howard now has his Canadian Amateur Radio license which he took with the Langley club. Howard has been in charge of the SARC website since September 2014 and he hopes to perhaps expand and do some redesigning of the website. At present neither he nor Edna have a radio. Once Howard is established in a new job he and Edna want to purchase a house with a big yard where they can have an HT antenna and their own radio shack. They also would like to have a dog. Howard hopes to have an interesting and satisfying job in communications. Howard's Filipino call sign is DU1IWT and Edna's is DU1MZQ.

On being asked what attracted her to Howard, Edna stated that it was his thoughtfulness, kindness, strong family foundation and his determination to succeed in his goals. Thanks for the good work you do with our website Howard and all the best in completing your goals, and Edna, we hope to see you out in the future as a SARC member.

~ Jinty Reid VA7JMR

Edna at the mic



Some Radio Trivia...

Ever listen to air traffic control and wonder why it is in AM mode? As we all know, AM is virtually obsolete (or so we thought).

It is done to avoid the Doppler effect, which can shift the frequency off established communications channels (as with satellite comms). Also, AM mode permits all stations working a facility at the same time to be heard simultaneously, whereas in FM mode only the station with the strongest signal is heard.

In case you are curious, tune to 128.600 MHz to hear Vancouver Approach, and at the same time pull up www.flightradar24.com to see aircraft locations.

~ Dave Tiplady VE7KTK

March 2016

**Surrey Amateur Radio Club**

Industry Canada BASIC AMATEUR RADIO Qualification Course

What Can I Do With My Radio License?

- Long range communications anywhere for free without commercial infrastructure
- Enhance your personal and your community's preparedness in an emergency
- Use satellite communication to speak around the world, perhaps even to an astronaut
- Use a computer, smartphone or tablet for free worldwide digital communications
- Participate in 'Radio Sports' like contesting and Fox Hunting
- Practice an exciting hobby

Learn In A Professional Setting
Qualified, Experienced Instructors

Practical Demonstrations
Technical Knowledge Not Required

Fee \$100
Includes Course Manual

Surrey Amateur Radio Club
For more information on the course visit
www.ve7sar.net or contact
sarc@ve7sar.net

Course starts March 29, 2016
8 consecutive Tuesday evenings
plus one optional Saturday workshop
Surrey Fire Training Centre
14901 64 Avenue, Surrey, BC

30% Discount For SARC Family Members

March 2016

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 1915 SEPAR Net 2000 SARC Net	2	3	4	5 0900 Klub Koffee Klatch: Kalmar Family Restau- rant, King George Blvd & 81 st Ave. CONTEST: ARRL Intl DX (SSB)
6 Burnaby ARC Swap Meet ve7bar.org/swap-meet/ CONTEST: ARRL Intl DX (SSB)	7	8 1915 SEPAR Net 2000 SARC Net	9 SARC General Meeting	10	11	12 0900 Klub Koffee Klatch: Kalmar Family Restau- rant, King George Blvd & 81 st Ave. CONTEST: Commonwealth
13 CONTEST: Commonwealth	14	15 1915 SEPAR Net 2000 SARC Net	16	17	18	19 0900 Klub Koffee Klatch: Kalmar Family Restau- rant, King George Blvd & 81 st Ave. CONTEST: BARTG (RTTY)
20 CONTEST: BARTG (RTTY)	21	22 1915 SEPAR Net 2000 SARC Net	23 SARC Exec Meeting	24	25	26 0900 Klub Koffee Klatch: Kalmar Family Restau- rant, King George Blvd & 81 st Ave. CONTEST: CQ WW WPX (SSB)
27 CONTEST: CQ WW WPX (SSB)	28	29 1915 SEPAR Net 2000 SARC Net SARC Basic Course 1900 Session 1	30	31		

For details on all SARC events, go to
ve7sar.net

For details on all SEPARS events, go to
separ.shutterfly.com/calendar

Contest Details: <http://hornucopia.com/contestcal/contestcal.html>

March 2016

CLUB EXECUTIVE 2015-2016

PRESIDENT

Stan Williams VA7NF
(and SEPAR Liaison)

VICE PRESIDENT

Brett Garrett VE7GM

SECRETARY

John Brodie VA7XB

TREASURER

Scott Hawrelak VE7HA

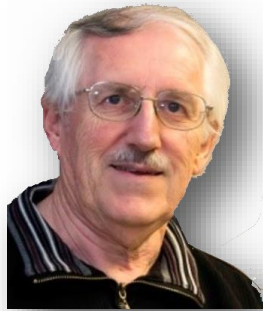
DIRECTORS

John Schouten VE7TI
(Communicator Editor)

Mike Plant VE7AT

Bill Gipps VE7XS

Al Peterson VA7ALZ



QRT

Stan Williams VA7NF

The SARC Clubhouse

Mike Plant has stepped down as President, remaining as a Director; our Vice-President Brett Garrett is on leave of absence. The Executive has offered me their confidence as President until the next AGM. The Executive has also unanimously passed a motion thanking Mike for his efforts.

About the clubhouse, some things are better described in photos...



On the Web

ve7sar.net

Between newsletters, watch your e-mail for announcements of events, monthly meetings and training opportunities. These announcements can also be found on our web page, or via:

Twitter

[@ve7sar](https://twitter.com/ve7sar)

FaceBook

[SurreyAmateurRadio](https://www.facebook.com/SurreyAmateurRadio)

Our YouTube Channel

[SurreyARC](https://www.youtube.com/SurreyARC)

SARC Photo Albums

Web Albums

or

tinyurl.com/SARCphoto





It's March

Your March presenter, Adam M. Farson VA7OJ, worked for Racal in South Africa from 1964 to 1967 as an RF design engineer. He has presented to SARC previously about World War II radio technology. This month he will speak on

- Manufacturers and Technology
- Tubes & components
- Land-based & naval systems—Freya (land) & Seetakt (naval)
- Würzburg; fighter control with Freya & Würzburg
- Airborne systems
- Lichtenstein (airborne intercept)
- Berlin microwave PPI system (based on British H2S)
- Cavity magnetron problems

SARC hosts an Amateur Radio net each Tuesday evening at 8 PM. Please tune in to the VE7RSC repeater at 147.360 MHz (+600 KHz) Tone=110.9, also accessible on IRLP node 1736 and Echolink node 496228.

On UHF we operate a repeater on 443.775MHz (+5Mhz) Tone=110.9 or IRLP Node 1737.

	SARC Net 20:00 Hrs
1 st Tuesday Standby	Drew VA7DRW Brett VE7GM
2 nd Tuesday Standby	Jinty VA7JMR Sheldon VA7XNL
3 rd Tuesday Standby	Dixie VA7DIX Ralph VA7UB
4 th Tuesday Standby	Kapila VE7KGK John VA7XB
5 th Tuesday Standby	Brett VE7GM Vacant
Want a turn at Net Control? Contact the SARC Net Manager	

Down The Log...

SARC Monthly Meetings

2nd Wed. (Sept-Jun)
1900 hr at the PREOC
Emergency Mgmt BC
14275 96th Avenue,
Surrey, BC

Weekly Club Breakfast

Saturday at 0900 hr
Kalmar Family Restaurant
8076 King George Blvd.
Surrey

SARC Net

Tuesday at 2000 hr local
on 147.360 MHz (+)
Tone=110.9

SEPARS Net

Tuesday at 1915 hr local
on 147.360 MHz (+)
Tone=110.9

VE7RSC Repeaters

2m: 147.360MHz+
Tone= 110.9Hz
IRLP node 1736
Echolink node 496228

1.2m: 223.960 Mhz -1.6
Tone=110.9

70cm: 443.775MHz+
Tone= 110.9Hz
IRLP node 1737



We Have A SARC Patch!

These are suitable for sewing on a jacket, cap or your jammies, so you can proudly display your support for the club.

The price is \$4 each or three for \$10 and they can be picked up at a meeting or the weekly Koffee Klatch.

Burnaby Radio Communications

Michael J. Wong VE7HMY
President/Owner
Commercial / Amateur Radio

4257 Hastings Street
Burnaby, B.C. V5C 2J5
Phone 604-298-5444
Fax 604-298-5455

Email: sales@burnabyradio.com
web: www.burnabyradio.com



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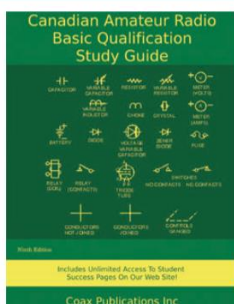
QUAD BANDS TRANSMISSION (including SW)
EIGHT BANDS RECEPTION (including AM & SW)

Twin Band/Same Band Simultaneous Reception;
Duplex Mode (Cross-Band Simultaneous TX&RX) Duplex Cross-Band Repeat;
Same-Band Repeat on two Combined Radios; 8 groups of Scrambler SOS Function



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- ✓ Matched to the Industry Canada Question Bank update in 2014 with more context for the new and revised questions
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Same Low Price! Just \$44.95 plus shipping and taxes.

Note for 8th Edition owners: We are still supporting your book. The section references for the Industry Canada questions have changed in the new edition and we have changed our website to ensure that when a reference to a section is presented it will be correct for both editions. The selection is made automatically for you when you log on.

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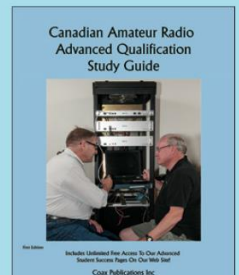
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